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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,418	05/31/2001	Kerji Hon	P 281359 OSP-10476	7533

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EXAMINER

ALEXANDER, LYLE

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 06/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/867,418	HORI ET AL	
Examiner	Art Unit	
Lyle A Alexander	1743	

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/7/04 interview summary.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 8/7/04
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1743

This Office action is in response to the 6/7/04 interview summary where Applicants argued convincingly the 5/11/04 final Office action was premature. Applicants state no amendments have been made to claim 19 and a new ground of rejection over this has been put forth in the final rejection. The below Office action is identical to the 5/11/04 action except that it is non-final. The Office regrets any inconvenience this oversight may have caused Applicant.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7, 17-18 and 20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Nakagawa et al. (USP 6,429,035).

Nakagawa et al. teach in column 4 lines 40+ melting polycrystalline silicon and subsequent analysis by secondary ion mass spectrometry to determine the impurities in the silicon.

Additionally, with respect to new claim 20, the taught hydrofluoric and nitric acids have been read on the claimed enchant.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. in view of Padovani et al.

Art Unit: 1743

See Nakagawa et al. *supra*.

Nakagawa et al. and JP are silent to the claimed filtering of the polycrystalline silicone.

Padovani et al. teach a method for the refining of silicone. Column 5 lines 11+ teach use of a filter to remove solid contaminants from the silicone. It is desirable to remove solids from the liquid silicone because the solids will be impurities.

It would have been within the skill of the art to modify Nakagawa et al. or JP in view of Padovani et al. and use a filter to remove solids from the silicone to gain the advantages of removing impurities.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. in view of Okada et al.

See Nakagawa et al. *supra*.

Nakagawa et al. and JP are silent to the use of a scanning electron microscope or energy dispersive X-ray spectrography.

Okada et al. teach in column 70 lines 41+ the use of energy dispersive X-ray spectrography (EDX hereafter), to measure impurities in silicone. EDX is advantageous because it can look at very small and specific zones.

It would have been within the skill of the art to modify Nakagawa et al. or JP in view of Okada et al. and use EDX to gain the above advantages.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. in view of JP 11145230 (references as JP hereafter).

See Nakagawa et al. *supra*.

Art Unit: 1743

JP teaches dissolving silicon with a mixture of hydrofluoric and nitric acids.

The court decided In re Boesch (205 USPQ 215) that optimization of a result effective variable is ordinarily within the skill of the art. A result effective variable is one that has predictable and well-known characteristics. The choice of acid to dissolve the silicon is a result effective variable as long as the expected result of silicon dissolution is achieved. It is desirable to have the choice of several different acids in the event that one is unavailable or experience price fluctuations.

It would have been within the skill of the art to modify Nakagawa et al. in view of JP and use a well known alternative acid to dissolve silicon, such as hydrofluoric and nitric acids, to gain the above advantages as optimization of a result effective variable.

Response to Arguments

Applicant's arguments filed 4/29/04 have been fully considered but they are not persuasive.

The Office acknowledges that claim 20 was not addressed in the 1/29/04 final rejection and has identified the applicability of the art on claim 20 above. Applicant further state the finality of the 1/29/04 was improper because the rejection of claim 19 was changed and no amendments to this claim were made. The Office notes the 11/5/03 amendments were made to claim 1 from which claim 19 depend. Thus, because of this relationship, the scope of claim 19 has also been changed/amended and required the previous 35 USC 102 rejections to be reconsidered in favor of a new 35 USC 103 rejection over the same reference.

Art Unit: 1743

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lyle A Alexander whose telephone number is 571-272-1254. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lyle A Alexander
Primary Examiner
Art Unit 1743

